

## Images in Paediatrics

# Ascaris Lumbricoides in a 13-year-old child

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A 13-year-old boy presented to East Nile Hospital, Khartoum North in December 2010 complaining of recurrent, colicky, central abdominal pain, vomiting and constipation for a few days. The vomiting was 3-9 times per day. His appetite was poor. There was no diarrhea and no urinary complaints.

He is a student in a primary school in Jazeera State and is living in Tangasi village with his family participating in agricultural activities. Sometimes he goes to the river for swimming and to drink water from there. His father is a medical assistant.

On examination, apart from generalized abdominal tenderness, no abnormality was detected. Stool analysis and X-ray abdomen were done initially (Figure 1). Seeing them, it was advised to do abdominal ultrasound and barium swallow (Figure 2 and 3). These tests revealed the presence of a single *Ascaris Lumbricoides* worm inside the lumen of the intestine.

Treatment in a form of mebendazole (Vermox), 100 mg twice daily for three days, was given. On follow up, all symptoms disappeared after expulsion of the worm as reported by the patient.

Ascariasis is a human disease caused by *Ascaris Lumbricoides*. Approximately, 1.5 billion individuals are infected with this worm with 95% rate of infection in Africa [1,2]. Ascariasis is prevalent in tropical regions and in

areas of poor hygiene. Certain genes have been identified in human populations that may increase the susceptibility to infection [3]. Infection occurs through ingestion of food contaminated with feces containing *Ascaris* eggs. Transmission also comes through municipal recycling of waste water into crop fields. Transmission from human to human by direct contact is impossible [4]. The length of the worm is 30 cm and adult worms can live for 1 to 2 years. Infections are usually asymptomatic. When present, symptoms include gastrointestinal discomfort, colic, vomiting, diarrhea, fever and live worms in the stools. Pulmonary and neurological complications do occur. A bolus of worms may obstruct the intestine and obstruction of the bile or pancreatic duct may also happen. Peritonitis, enlargement of liver and spleen may manifest, associated with eosinophilia. On X-ray there is 15-35 cm long filling defects, sometimes with whirled appearance.

Drugs used for treatment are called ascaricides and include: mebendazole (Vermox) for 3 days, piperazine as a single oral dose, albendazole, thiabendazole, pyrantel pamoate (Antiminth), Santonin and oil of chenopodium. Native Americans have traditionally used epazote [5]. Prevention includes regular anthelmintic treatment, efficient sanitation infrastructure through use of toilet facilities, safe excreta disposal, protection of food from dirt and soil, thorough washing of produce and hand washing [6].

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Figure 1: Plain X-ray of the abdomen showing parts of the worm as curvilinear soft-tissue-density cords (arrows).

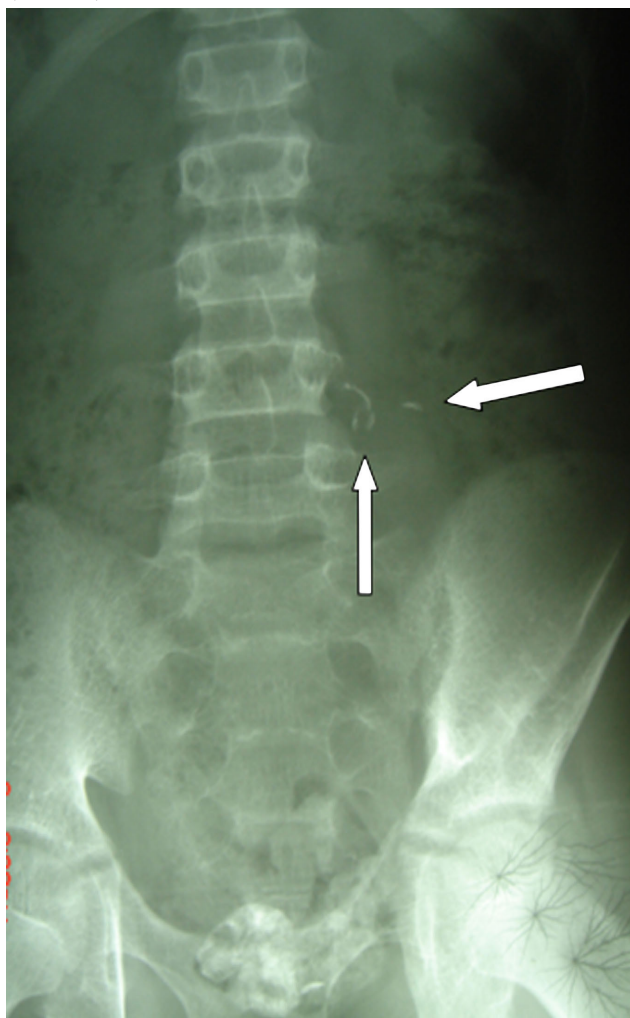


Figure 2: Barium meal showing the worm coated (arrows).

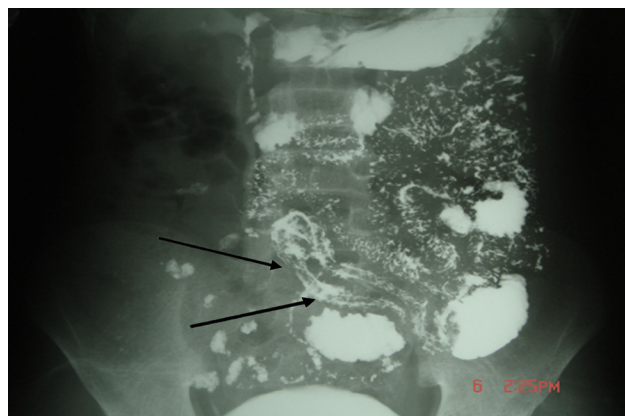
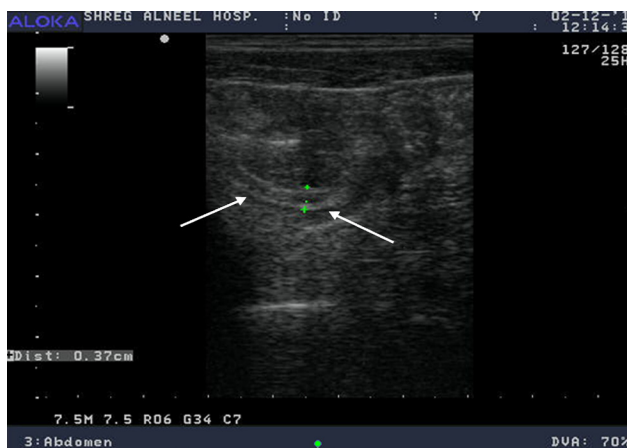


Figure 3: Ultrasound Abdomen showing the Ascaris worm as a hypoechoic tubular structure with well-defined echogenic walls (arrows).



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